Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *The American Journal of Psychology; Ar. de Ps.* = *Archives de Psychologie; Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie; Ar. f. sys. Ph.* = *Archiv für systematische Philosophie; Br. J. Ps.* = *The British Journal of Psychology; Int. J. E.* = *International Journal of Ethics; J. of Ph., Psy., and Sci. Meth.* = *The Journal of Philosophy, Psychology, and Scientific Methods; J. de Psych.* = *Journal de Psychologie; Psych. Bul.* = *Psychological Bulletin; Psych. Rev.* = *Psychological Review; Rev. de Mét.* = *Revue de Métaphysique et de Morale; Rev. Néo-Sc.* = *Revue Néo-Scolastique; Rev. Ph.* = *Revue Philosophique; Rev. de Ph.* = *Revue de Philosophie; R. d. Fil.* = *Rivista di Filosofia e Scienze Affini; V. f. w. Ph.* = *Vierteljahrsschrift für wissenschaftiche Philosophie; Z. f. Ph. u. ph. Kr.* = *Zeitschrift für Philosophie und philosophische Kritik; Z. f. Psych.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane, I. Abtl.: Zeitschrift für Psychologie.* —Other titles are self-explanatory.]

Behavior as a Category of Psychology. JAMES R. ANGELL. Psych. Rev., XX, 4, pp. 255-270.

The term consciousness is at present attacked both by philosophers and psychologists. Some philosophers make consciousness a relation between physical objects; others exhibit the ambiguities contained in the conception. The animal psychologists, finding subtle dangers in reasoning from the human to the animal mind, tend to shun the term consciousness and use such terms as 'acquired' and 'instinctive' behavior. Social psychologists are giving up the introspective method, since their problems require a study of human behavior and do not necessarily involve the concept of consciousness. Functional psychologists, in so far as they emphasize the entire act from sense organ to muscle as the object of attack, welcome an objective category like behavior. Several other tendencies in current psychology lend themselves to incorporation in the same movement. Taking behavior as a substitute for consciousness, what is the term to include? It would refer mainly to physiological, zoölogical and mental phenomena. The behavior to be studied in man would be partly of the instinctive, partly of the personalistically adaptive sort. Can we, however, give an account of human behavior, leaving out all purely subjective or conscious reference? Behavior methods tell us that certain stimulations fall upon the sense organs and, in part, issue at once in muscular or glandular activities; they tell us of certain of the neural pathways involved; something of the changes occasioned by muscular activities in the external world; that some coördinated and efficient muscular activities arise without an apparently adequate sensorial stimulus; that many of the modifications of present behavior are attributable to previous behavior; that the organism, by storing up its experiences, creates the possibility of a high variability in reactions. Yet there is a gap between stimulus and reaction which we must either bridge with information gleaned from introspective sources or leave open. Even for one frankly and exclusively interested in objective behavior as such, introspection must be held to afford information not to be gained elsewhere.

J. R. TUTTLE.

Psychology as the Behaviorist Views It. JOHN B. WATSON Psych. Rev., XX, 2.

Taking mental states as its data and introspection as its method, structural psychology has embarrassed itself in speculative questions which cannot be experimentally approached. Functional psychology, though emphasizing the biological significance of the mental life, has used the terminology of the structuralists. To the behaviorist, psychology is a purely objective, experimental branch of natural science and has no need of introspection. Formerly, psychologists have regarded the facts of animal behavior as possessing value only as reinterpreted in terms of a conjectural animal consciousness. The result has been to *construct* an animal consciousness. The behaviorist regards the facts of behavior as of value *per se* and he also extends this view to human behavior. A psychology, he holds, can be written which does not use the terms consciousness, mental states, mind, content, introspectively verifiable, imagery, and the like. This psychology can be expressed in terms of stimulus and response, habit formation, habit integrations, etc. Starting out from the observed facts of the hereditary and habit equipments of animals and man, a behavior psychology would endeavor to predict stimuli from response, response from stimuli; its goal would be to obtain accurate knowledge of adjustments and the stimuli calling them forth. This method would render possible, to a far greater degree than at present, the practical application of psychological principles. Indirect evidence for the defensibility of the behaviorist's position may be gained from the fact that those branches of psychology which have practically withdrawn from experimental psychology and are less dependent upon introspection, such as experimental pedagogy, the psychology of drugs, etc., are in a flourishing condition. It is possible to take up the various psychological problems, one by one, and show how each may be stated in terms of behavior. Behavior data will show what each organ stands for in the way of function. The anatomist can take these results and show what stimuli are responsible for any particular responses and what physico-chemical relations are involved. Though it is more difficult to express imagination, judgment, reasoning, and conception in terms of behavior, there is no reason to suppose that a more developed method cannot accomplish this result.

J. R. TUTTLE.

The Comparative Method in Psychology. CARVETH READ. Br. J. Ps., VI, 1, pp. 44–59.

The mere making of comparisons is not the comparative method. The comparative method requires the assumption of community of descent, or of tradition, in the phenemona it deals with. Explanation by the comparative method consists in reconstructing the antecedents of the phenomenon we are investigating and giving its history. Biologists and psychologists trust to find by a comparison of species, under the idea of common descent, the antecedents of structures and functions that occur in any of them whose history cannot be directly shown. The comparative method explains by pointing out a *possible* course of causation in the production of some phenomenon by tradition or inheritance; it does not show that certain steps were actually taken, but only that, judging by parallel cases, they were probably taken. The history of an instinct, though the very steps of its descent to extant species be irrecoverable, may conceivably be recovered as well as, say, the horse's anatomy. The object of the comparative method is not only to point out probable lines of descent of organs or instincts, but to indicate the causes of each modification so far as they can be assigned. Certain indispensable assumptions mark the limits of comparative psychology: first, the presence in all animals of some degree of consciousness; second, a connection between sensation and reaction, between reaction and feeling. At higher levels we must successively assume the associability of sensations, of perceptions, and ideas. To determine the marks by which to decide whether a species lives at one level or another is a chief problem of this study. Though certain functions are secondary, the *laws* of mental functions must be assumed everywhere to prevail. Modifications that take place in the line of descent are due either to general advantages, reducible for the most part to utility or economy, or to particular conditions which give rise to specific instincts or other adaptations. If particular conditions are assigned for any change of structure, instinct or faculty, evidence must be given that the conditions actually occurred and that they might be expected to produce the effect assigned. In applying the comparative method to the human mind, we must go back of the study of the mind of the child and of the savage, to animal psychology; possibly to plant psychology, since plants have organs of perception. Animal psychology is closely bound up with zoölogy. In fact, animal psychology is a way of regarding a certain area of the zoölogical field, namely, the behavior of animals, considered as susceptible of subjective interpretation. Its chief difficulties are its comprehensiveness and vastness, and the intrinsic difficulty of finding a subjective interpretation of the facts.

J. R. TUTTLE.

Finalism and Freedom. HOWARD N. BROWN. Harv. Theol. Rev., VI, 3, pp. 267–279.

The radical weakness of Darwin's philosophy of development is that it is obliged to rest everything ultimately on a basis of pure chance. Variations from type are purely accidental, due to changes of environment, or to different combinations of the sexes employed in reproduction. The theory might be amended in two ways to make good the deficiency: Either, in the stream of life itself, the power of desire helped to bring forward the needed variation at the opportune moment, or, one can suppose that above the stream of life there is a power capable of determining the main direction of its flow. This latter supposition has been steadfastly repudiated by men of science, due, in part, to the fact that the assumption has been misinterpreted and overworked by churchmen, and, in part, to the persistent determination to regard extra-human nature as non-intelligent. But there appears to be likeness enough between ourselves and external nature to make it seem absurd to say that life is intelligent in us and wholly unintelligent outside. If there be any mind in us there is some mind there; and wherever there is mind it is entirely proper to predicate purpose. This introduces theism, and, at the same time, the old question of adjusting it to the facts of life, especially those of evil and sorrow. But these facts may be accounted for by the assertion of an element of freedom in our life. God does not design the miseries which afflict mankind. They are the product of man's wrong use of the alternatives left to his choice. To these two principles of intelligence and freedom may be attributed both the upward trend of organic evolution, and the inconsistencies and apparent failures along the way.

Mark E. Penney.

The Problem of Evil. Rabindranath Tagore. Hibbert Journal, XI, 44, pp. 705–716.

The real question is, Is evil absolute and ultimate? The wonder is not that there should be obstacles and sufferings in this world, but that there should be law and order and joy. Life as a whole never takes death seriously; it instinctively takes a wider view, and never accepts a disability as a permanent fact. Potentiality of perfection outweighs actual contradictions. It is the function of our intellect to realize the truth through untruths, for knowledge is nothing but continually burning up mistakes to set free the light of truth. The sense of goodness comes out of the connected view of the wholeness of the field of life, the present and the future. The good is that which is desirable for our greater self. Our moral faculty is the faculty by which we know that life is not made up of fragments, purposeless and discontinuous, and that man is not a detached being, restricted to his own individuality. To the man who lives for an idea, for his country, for the good of humanity, life has an extensive meaning, and pain or evil becomes less important. Buddha teaches that when man merges the individual in him in the universal, he becomes free from pain; because, by submitting his will to the universal will, he learns to transmute pain into joy. There is no evil when the adjustment of the finite to the infinite is made perfect.

Alma R. Thorne.

The Problem of Freedom after Aristotle. G. S. Brett. Mind, N. S., 87, pp. 361–373.

The problem of Epicurus was to find room for freedom in a system of physics based on Democritus. In opposition to Democritus, Epicurus held that motion is undetermined until it actually takes place in accordance with law, not predetermining fate. He opposed that belief in an overruling Reason which committed the Stoics to complete causation and fatalism; for he sought a conception of causality which would admit freedom, and an explanation of the world on the fewest possible assumptions. These he found in the theory that in the chaos before the cosmos, the atoms were unlimited by relations and their motions undetermined. The actual direction of motion was then due to the circumstances of the relations of the atoms, whose laws were formed by the nature of their own activities. Carneades carries over the same theory from physical to mental action. Certainty is the result of deliberation from within, not imposed by the object from without. Voluntary motion has no antecedent and external cause, but the cause is the nature of the agent. Life is not, as the Stoics held, the relation of man to the whole, but of man to his immediate surroundings. Nothing is preordained and all that happens is the result of man's activity combined with those other activities which he recognizes as coöperating causes.

NANN CLARK BARR.

The Pessimism of Creative Evolution. J. W. SCOTT. Mind, N. S., 87, pp. 344-361.

Creative Evolution is virtually an examination of the powers of natural science to give an ultimate account of things. According to science, progress is accomplished by the use of energy, the supply of which will some time be exhausted; for we can only release, not create, energy. But Bergson holds that science misses the real character of movement; for intellect, the instrument of science, cannot grasp the nature of becoming. Evolution is not a running down, but a process in which more is coming to be. In answer to the question, How can something come from nothing, Bergson denies the reality of this Nothing, which is an abstraction of the intellect. The intellectual condensation of the flow of reality into stable cross sections cannot give reality, which is movement. Like the idea of Nothing these intellectual snapshots are not real, for they are no part of the moving reality. But to gain reality by renouncing intellect, and with it perception, imagination, language and moral practice, is to lose something of real value. If, on the other hand, both the stable positions and the movement are independently real, ultimate reality is contradictory. The general trend of evolution towards further scattering leads to a pessimistic conclusion, since there can be no end, no unity in a nature whose principle is discord. The result of this sundering would be atoms of life as comfortless as the atoms of materialism.

NANN CLARK BARR.

The Practical Tendencies of Bergsonism. ARTHUR O. LOVEJOY. Int. J. E., XXIII, 3, pp. 253-275, and 4, pp. 419-443.

The fact that the philosophy of Bergson has been discussed so widely and favorably in popular and philosophical meetings and in periodicals is due largely to its ability to satisfy the perennial human craving to be mystified and initiated. Though Bergson has said but little relating to ethics or religion, yet his writings contain many ethical and religious implications to which his followers have given varied and diverse interpretations. In his emphasis upon intuition he has laid the basis for a sort of inward regeneration; a return from logical thought, action, and the social life, to the deeper self, to pure duration and the immediate through intuition, is the attainment of the supreme good. The intellect, which only confuses reality, must be abandoned and replaced by intuition which alone gives us true reality. All modes of thinking which have reference to action lead us away from reality; we must return to the immediate and hence the contemplative life. We must also abandon the social life which has been intellectualized and return to the solitary life through intuition. However, there are passages in Bergson's works which contradict these interpretations; in fact there are six different and irreconcilable descriptions of the content of this intuition: (1) That which is given us in intuition is the Absolute Unity of pure duration which contains no element of time, is the coincidence of being and knowing, is indivisible and devoid of all action, yet it is pure mobility, is time in its actual flow. (2) Bergson is the modern Heraclitus for in his system all is change. (3) In his intuition, Bergson has introduced a type of evolution which is not mere change, but a change of a definite and cumulative sort whose propelling force is reality itself. A backward-looking habit of mind is required to find this 'underlying' which is relatively unevolved and undifferentiated. This is instinct which, though it transcends the intellect, must be guided by it. (4) Yet in the instinct of maternal devotion we find a genuinely evolutionary and forward-looking conception. Here a living being is above all a place of passage, and we see that the essential thing in life is the movement by which life is transmitted. (5) Bergson's contention that all evolution is life, conscious and unique, that it is, in fact, creative, finds its expression in the syndicalism of M. Sorel, who declares that the world is made anew and not created out of the past, and that the free man must abandon intelligence and return to the rule of the individual and natural man. Likewise violence is legitimate; for it is a struggle in which the proletariat will gain recognition suddenly, and without a compromise and a mingling with the intellectualized bourgeois. Again, in order to rouse the masses to action, a vivid and concrete representation is necessary, and this is found in the Bergsonian myth; this myth, best illustrated by the general strike, is known to be an illusion, but it is treated as if it were a reality. By creating an intellectual atmosphere where emotional reactionisms of all sorts flourish, Bergson has aroused in France the contempt for analysis and the impatience of constructive efforts and social reforms. Ethically, his philosophy produces a vague belief in the intrinsic desirability of constant change, a sort of generalized progressivism; religiously, M. Joseph Wilbois thinks, it produces an ultramontanism. (6) Considering consciousness in its true nature it is perfect memory, and reality becomes a conservation system which has the ethical and religious implications of a generalized traditionalism or conservatism. To be sure all of these implications cannot be attributed to Bergson, but he is at least responsible in so far as his statements are obscure and contradictory, thus presenting the possibility for many interpretations. And certainly he is responsible for his anti-intellectualistic and mystic elements, as well as the depreciation of the life of action. By combining the backward-turning habit of thought with the doctrine that the greatest good and deepest insight lies in the return to the immediate, the former conception has lost nearly all its meaning and value. In his creative evolution we are invited to go back to the primitive, rudimentary, and sub-rational self,—to the hole of the pit whence we were digged.

FRANK DICKINSON.

The Significance of Coercion. T. C. HALL. Hibbert Jour., XI, 44, pp. 830–835.

Law carries with it the implication of force sufficient to compel obedience to its demands. It has two aspects, the protective and the punitive. Between foes a treaty relationship may be prompted by self-maintenance, but the normal outcome of angry primitive reactions is extermination. Within the group, however, the coercions used have a wholly different purpose. The interest of the coerced is always prominent. Unsocial conduct is punished for the sake of the conservation of the group, in which is involved the interest of the offender. By punitive coercions the offender is to be restored to the status of ethical maturity which has been lost by his offence. Thus a redemptive goal should mark all really moral punitive coercions.

ALMA R. THORNE.

Christianity in the Light of its History. A. C. M'GIFFERT. Hibbert Jour., XI, 44, pp. 717–732.

Christianity has been distinguished from Judaism without the warrant of Jesus, who lived and died a loyal Jew. When Judaism rejected him, he became, through Paul, the center of an independent cult. The religion of Israel was a state affair; the religion of Jesus was at heart the assertion of personal religion, an individual responsibility toward God. Christianity was only one of many cults attracting attention in Rome, at the time when individualism was fast taking the place of nationalism. Beginning as an expression of the individual religious life rather than as a public cult, it was free to minister to the most diverse needs, and to adjust itself to all sorts of conditions. Within primitive Christianity there naturally arose manifold doctrines and cults; but in the very fact that the Church was formed the stereotyping process was begun. In the fourth century it became the state religion of the Roman Empire; and the dominance which the Catholic Church finally attained over western Europe was due not so much to its Christianity as to its Romanism. All the great religious revivals of the Middle Ages were due to the rediscovery of Jesus, and these rediscoveries were always individual affairs, never affairs of the Church. Monasticism at first offered a haven to the non-conformist, but, as soon as it become institutional, monasticism repressed individuality. Fortunately both for it and for the Catholic Church, the continual forming of new orders made progress possible, and enabled Catholicism to retain within the fold those earnest and devout spirits most apt to chafe under the rigidity of a single ecclesiastical institution. Catholic unity was made permanently impossible when Luther condemned the monastic vow itself as unchristian. From the beginning, one of the extraordinary things about Christianity has been its great variety. Philosophers and fanatics, rationalists and reformers have all added to our present mass of beliefs. Much is truly Christian which in its origin had nothing to do with Christ. The unity in Christianity belongs to the sphere of life rather than to that of logic, and it comes to its highest expression not in formulæ but in enthusiasms. The motto "Back to Christ" should be changed to "Forward with Christ."

ALMA R. THORNE.

The Social Self. GEORGE H. MEAD. J. of Ph., Psy., and Sci. Meth., X, 14, pp. 374-380.

Introspection and analysis show that the self as object, the 'I,' is the memory image of the self who acted toward himself and is the same self who acts toward other selves, and that the self as subject, the 'me,' is the object of the social conduct of others. The observer who accompanies all our self-conscious and social conduct is the response the 'I' makes to his own conduct. This frequently may be in the rôle of another assuming the attitude of another. And until this process has been developed into the abstract process of thought, the self is loosely organized and very clearly social. In the reconstruction, that is, in the organization of habit or formation of character, the self arises out of a partial disintegration,—the appearance of the different interests in the forum of reflection, the reconstruction of the social world, and the consequent appearance of the new self that answers to the new object.

FRANK DICKINSON.

The Social Implications of Consciousness. WARNER FITE. J. of Ph., Psy., and Sci. Meth., X, 14, pp. 365-374.

Consciousness is a process of forming an idea of an object. Social consciousness implies a personal interrelationship of human-beings with a mutual consciousness of this relationship. This kinship is not explained by imitation, nor by the expression of common interests, but by an expression of mutual interests through an exchange of ideas. In the conscious process, even in the realm of morality, the idea formed must be an individual interpretation of the object or other. Consciousness is an affair of making things over and in so doing we have the power to realize our own freedom and the obligation to respect the other's freedom. The very consciousness which creates any obligation, also creates the power of realizing individual ends. In all social consciousness, the object, or other, is one with whom we are in direct communication; when it is an other in whom we are interested we have in consciousness all that is implied in a true sympathy and compelling loyalty. The social unity thus becomes a unity appropriate to the nature of conscious and intelligent persons,—a unity of perfect understanding; and the degree of understanding determines the intimacy. FRANK DICKINSON.

La position actuelle du problème de l'hérédité. S. JANKÉLÉVITCH. Rev. Ph., XXXVIII, 6, pp. 545-567.

The problem of heredity is the central one of modern biology. Although it is generally agreed to bring all organic phenomena under the law of evolution, there is a great difference of opinion as to what evolution means. There are many theories of evolution, due principally to the various methods of stating and solving the problem of heredity. The question of heredity is not a question of pure biology, but involves anthropological and sociological issues. For this reason, it is very complicated and difficult to approach with true scientific impartiality. There is a strong tendency to be content with a state of doubt regarding the subject because of a fear that a definite solution might prove to be in conflict with certain desires, interests, or moral principles. The various theories of heredity may be classified into two groups—those which hold that acquired characters are, and those which hold that they are not, transmissible by heredity. If we lay aside all prejudice in the matter and study the opposed camps from the standpoint of pure theory, we discover that the difference is due largely to a series of misunderstandings. In the first place, the neo-Lamarckians and the neo-Darwinians do not mean the same thing by the notion of heredity. Both emphasize the fact of heredity, but the former is interested in it from the point of view of the changing species, the latter, from the point of view of the static or persistent species. The question of the former was, How does the species evolve and transform itself? The question of the latter was, How does the species preserve and maintain itself? In the second place, the two schools differ in their notion of what constitutes an acquired character. A third misunderstanding arises from the different rôle and importance which the two schools attribute to environment in the history of living organisms. The neo-Lamarckians claim that the function creates the organ. Their opponents, admitting active adaptation, claim that the new character was always latent in the ancestral organism. If heredity means a 'general quality of the living world' it excludes the possibility of acquiring specifically new characters. Acquired and innate refer to the same phenomenon from two different points of view. Neo-Darwinism may be said to conform more closely to the logic of the facts than does the opposite theory. H. G. TOWNSEND.

The Place of Volition in Education. W. J. COLLINS. Intern. J. of Ethics, XXIII, 4, pp. 379-396.

(This is the annual address to the Moral Education League in London). There are two great sources of indifference or opposition to the introduction of moral instruction into the school. These are a misapprehension as to what is meant by moral education and as to the methods advocated for imparting it, and the failure clearly to understand its relation to religious education.

The reason why religious education cannot be given in the schools with general approval is that here we immediately find ourselves on ground which forms the basis of debate between the diverse denominations. We have, however, in the realm of ethics a large amount of material on which the 'divergent' religious views are in agreement and which consequently constitutes suitable matter for instruction. In answer, on the other hand, to those who are not clear as to what is meant by moral education, the subject may be considered as though it had to deal with the training of the will. Starting with the fundamental assumption of a will free to choose the higher in the presence of the lower, surely we will find that "procedure according to principles which the mature mind and experience of mankind have elaborated, can be of infinite service in training the agent of choice, in cultivating fixity of purpose, in raising high ideals, and, by a graded scheme of moral education, help to evolve, not merely a good animal, but a good man." R. B. OWEN.

A Brief Survey of the Field of Organic Evolution. GEORGE HOWARD PARKER. Harv. Theol. Rev., VI, 3, pp. 245–266.

The theory of organic evolution includes the theory of descent with modifications and certain explanatory hypotheses, such as Lamarck's hypothesis, Darwin's natural selection, De Vries's theory of mutations, and others. The theory of descent with modifications is accepted by all biologists of any standing as an established fact. Criticisms and objections concern only explanations of the method by which the present status has been attained. As an explanation of descent, Lamarckism is a possible but a doubtful factor because of the improbability of the inheritance of acquired characters. Darwinism, or natural selection, on the other hand, is apparently a real factor in organic evolution, at least roughly outlining natural species. Its chief defect, the inability to produce useful traits from small beginnings, is apparently fully met by the mutation theory, which, however, is too novel to be passed on with any degree of certainty. The popular distrust which has recently arisen concerning evolution is based on a confusion of natural selection with descent. As to the effectiveness of the former, the biologist has good reason for doubt, as to the reality of the latter, he has none whatever.

MARK E. PENNEY.

Continuity. SIR OLIVER LODGE. Science, XXXVIII, Nos. 977 and 978.

This is the address of the president of the British Association, read at Birmingham, Sept. 10, 1913.—The main characteristics of the promising though perturbing period in which we live, are rapid progress and fundamental scepticism. A critical examination of all scientific foundations is going on, accompanied by a mistrust of purely intellectual processes. This attitude is being extended until a still deeper scepticism is forthcoming. The contention is made that all laws of nature are but conventions, not truths, and that we have no faculty for ascertaining real truth. But in spite of all modifications in fundamental principles, they are still true in the large; they are not disobeyed but departed from through the action of a known added cause. We find, as Poincare says, that continuity really reigns in the realm of matter. The great tendency in modern science is to emphasize discontinuity, even energy being declared to be of an atomic nature. Time also would become discontinuous, if the principle of relativity in an extreme sense establishes itself. But the speaker believes that the atomic hypothesis cannot be pressed too far, and is an upholder of ultimate continuity and the ether of space. The attempt to make space and time discontinuous quantities is unjustifiable, as we know nothing about them experimentally. They are ultimate data, abstractions based on experience, not concrete physical entities. Is ether also an abstraction? Although the difficulty of experimenting on ether is well known, still we can know one thing about it that is metrical in character, namely, the velocity with which it can transmit transverse waves. This proves it a physical agent. We cannot, it is true, observe motion in relation to the ether, as curious compensating effects always come in. This is readily explained on the basis of the electrical theory of matter. If it be true, all material interaction will be electrical, *i. e.*, etherial. As every kind of force would then be transmitted by the ether, the fact that all our apparatus is traveling together at one and the same pace would eliminate our chance of detecting the motion. It is predicted, however, that our motion through the ether will some day be detected by comparing our speed with that of light. At least, the electrical theory of matter, which assumes the ether, is positive and gets results, the principle of relativity is negative, and involves a virtual denial of the existence of ether. And yet this ether is the engine of continuity, without which matter would be merely a lot of chaotic fragments. Still it is denied because it cannot be sensed. This is what science has no right to do. Comprehensive denials are beyond its field, although it may ignore, for practical purposes, any given hypothetical set of facts or explanations. All intellectual processes are based on abstraction. To deny effectively needs much more comprehensive knowledge than to assert, and this science does not possess. Its results are unquestioned as far as they go, but they ignore ultimate explanations, furnishing always proximate ones. They must be supplemented. Even the biologist is justified in attempting to state everything in terms of physics and chemistry for his practical purposes. But it must never be forgotten that this does not exhaust the phenomena of life. Whenever the scientist goes too far and denies the existence of what he abstracts from, we must appeal to the direct experience of the everyday world. Also, the fact that we do not perceive a force, does not prove its non-existence. The biologist who denies life and design ignores much that he cannot explain. And so with other questions. Immortality, intuition and revelation, psychical phenomena, discarnate intelligence that may interact with us on the material side, are open questions and are some of them susceptible to investigation. Scientific method is not the only way to truth. The actions of the Deity make no appeal to special sense, only a universal appeal, and our methods cannot detect uniformity.

R. B. OWEN.